

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/056076 A2

(51) International Patent Classification⁷:

A61M

(21) International Application Number:

PCT/US2004/039888

(22) International Filing Date:

29 November 2004 (29.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/527,092 4 December 2003 (04.12.2003) US

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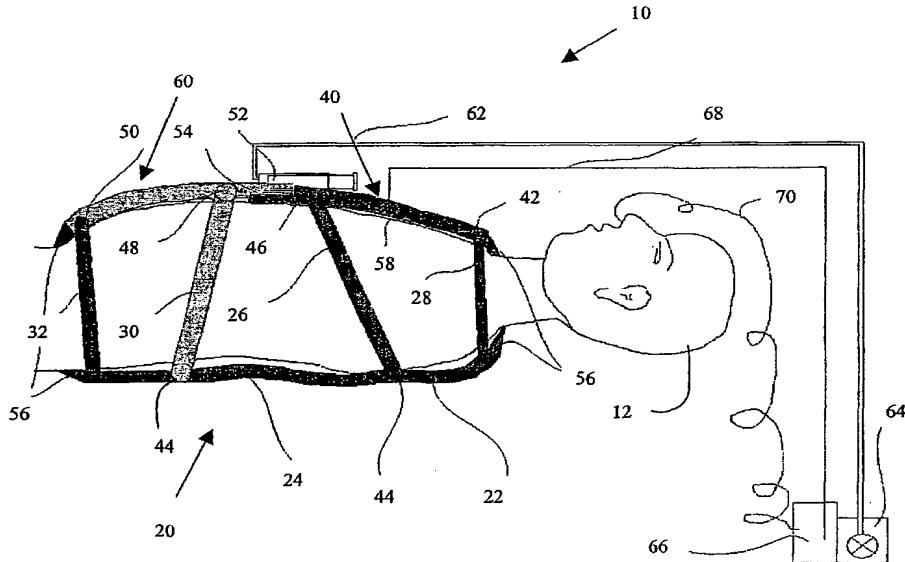
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: NEGATIVE PRESSURE VENTILATION AND RESUSCITATION SYSTEM



(57) Abstract: A negative pressure ventilation system comprising a dynamically movable, multi-component artificial rib cage configured to fit snugly around the patient's own chest wall and abdomen is disclosed. The shape, dimensions and the dynamic movement of the artificial rib cage are designed to mimic those of the patient's own chest wall. The artificial rib cage includes an artificial spine to which are connected artificial ribs for forming an artificial chest wall including a sternum component. An abdominal component for placement on the patient's abdomen is connected to the chest wall component through a translating element which allows the abdominal component to move towards and away from the chest wall component. The chest wall and abdominal components cooperatively interact to allow the ventilator to move both the chest wall and abdomen during inspiration and expiration, mimicking the patient's own natural breathing pattern.

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Published:

— without international search report and to be republished upon receipt of that report

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